

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application;

--1. (Currently Amended) An acoustic apparatus comprising:
a headphone section mounted on a user head, having a microphone element for detecting sound around the user and a signal acoustic transducing element functioning as a sound source for canceling the sound around the user, housed in a headphone box, with a first output terminal for outputting a microphone audio signal collected by the microphone element and a first input terminal for inputting a cancel audio signal supplied to the signal acoustic transducing element; and
a control circuit section independent from the headphone section having a second input terminal connected to the first output terminal and a second output terminal connected to the first input terminal for controlling at least frequency characteristics and gain characteristics of the microphone audio signal from the microphone element of the headphone section input through the second input terminal, for generating the cancel audio signal for canceling the sound around the user, and for supplying the cancel audio signal to the signal acoustic transducing element of the headphone section through the second output terminal, whereby ambient sound around the user is cancelled in a range of 50 Hz to 1.5 kHz, said control circuit section including recording means for recording the microphone audio signal output from the microphone element.

--2. (Cancelled)

--3. (Previously Presented) The acoustic apparatus according to claim 1, wherein the control circuit section further comprises:

means for adding different audio signals to the cancel audio signal using a signal audio converter element.

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--4. (Previously Presented) The acoustic apparatus according to claim 1, wherein the control circuit section further comprises:

means for adding different audio signals to the cancel audio signal using a signal audio converter element as a sound source; and

a remote control configured to supply remote-control signals for remotely controlling output of the different audio signals.

--5. (Currently Amended) An acoustic apparatus comprising:

a headphone section mounted on a user head, having a microphone element for detecting sound around the user and a signal acoustic transducing element functioning as a sound source for canceling the sound around the user, housed in a headphone box, with a first output terminal with an adjusting section for adjusting an output of a microphone audio signal collected by the microphone element and a first input terminal for inputting a

cancel audio signal supplied to the signal acoustic transducing element, and

a control circuit section arranged in a housing independent from the headphone section and having a second input terminal connected to the first output terminal and a second output terminal connected to the first input terminal for controlling at least frequency characteristics and gain characteristics of the microphone audio signal from the microphone element of the headphone section input through the second input terminal, for generating the cancel audio signal that can serve as a sound source for canceling the sound around the user, and for supplying the cancel audio signal to the signal acoustic transducing element of the headphone section through the second output terminal, whereby ambient sound around the user is cancelled in a range of 5 Hz to 1.5 kHz, said housing also having arranged therein recording means for recording the microphone audio signal from the microphone element.

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--6. (Previously Presented) The acoustic apparatus according to claim 5, wherein an amplifier section is included in the headphone box behind the adjusting section for amplifying the microphone audio signal from the microphone element and for adjusting the microphone audio signal from the microphone element, where gains are controlled by amplifying the microphone audio signal.

--7. (Previously Presented) The acoustic apparatus according to claim 5, wherein an amplifier section for generating signals serving as a sound source for canceling the sound around the user and adjusting means for adjusting an output level of the amplifier section are provided in the headphone box, and gains of the cancel audio signal input to the signal acoustic transducing element are controlled.

--8. (Previously Presented) The acoustic apparatus according to claim 5, wherein an adjusting section adjusts the microphone audio signal from the microphone element that serves as a sound source for canceling the sound around the user and adjusts the microphone audio signal from the microphone element in the headphone box,

 said adjusting means having operating means operable by the user from outside the headphone box, and

 an amplifier section for amplifying the microphone audio signal adjusted at the adjusting section.

--9. (Currently Amended) An acoustic apparatus comprising:
 a recording/playback device;

 a headphone section mounted on a user head, having a microphone element for detecting sound around the user and a signal acoustic transducing element functioning as a sound source for canceling the sound around the user, housed in a headphone box, with a first output terminal for outputting a microphone

audio signal collected by the microphone element and a first input terminal for inputting a cancel audio signal supplied to the signal acoustic transducing element; and

a remote control connected to said recording/playback device for controlling operation of said recording/playback device and feeding the microphone audio signal to the recording/playback device, said remote controller being independent from the headphone section and including a control section having a second input terminal connected to the first output terminal and a second output terminal connected to the first input terminal for controlling at least frequency characteristics and gain characteristics of the microphone audio signal from the microphone element of the headphone section input through the second input terminal, with said frequency characteristics and gain characteristics being adjusted to achieve a predetermined level at a predetermined frequency between 50 Hz and 1.5 kHz, for generating the cancel audio signal that can cancel the ambient sound around the user within a range of 50 Hz to 1.5 kHz, and for supplying the cancel audio signal to the signal acoustic transducing element of the headphone section through the second output terminal.

--10. (Currently Amended) An acoustic apparatus comprising:

a headphone section mounted on a user head, having a microphone element for detecting sound around the user and a signal acoustic transducing element functioning as a sound source for canceling the sound around the user, housed in a headphone box, with a first output terminal for outputting a microphone audio signal collected by the microphone element and a first input terminal for inputting a cancel audio signal supplied to the signal acoustic transducing element;

a control circuit section arranged in a housing separate from the headphone section a second input terminal connected to the first output terminal and a second output terminal connected to the first input terminal for controlling at least frequency characteristics and gain characteristics of the microphone audio signal from the microphone element of the headphone section input through the second input terminal, for generating the cancel audio signal for canceling the ambient sound around the user within a range of 50 Hz to 1.5 kHz, and for supplying the cancel audio signal to the signal acoustic transducing element of the headphone section through the second output terminal, and a recording/playback device arranged in the housing for recording the microphone audio signal from the microphone element; and

a circuit configuration for canceling the surrounding sound used by the control circuit section that is of a feed-forward system.

--11. (Currently Amended) An acoustic apparatus comprising:

a recording/playback device;

a headphone section mounted on a user head, having a microphone element for detecting sound around the user and a signal acoustic transducing element functioning as a sound source for canceling the ambient sound around the user within a range of 50 Hz to 1.5kHz, housed in a headphone box, with a first output terminal for outputting a microphone audio signal collected by the microphone element and a first input terminal for inputting a cancel audio signal supplied to the signal acoustic transducing element;

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a remote controller connected to said recording/playback device for controlling operation of said recording/playback device and feeding the microphone audio signal to the recording/playback device, said remote controller being independent from the headphone section and including a control circuit section having a second input terminal connected to the first output terminal and a second output terminal connected to the first input terminal for controlling at least frequency characteristics and gain characteristics of the microphone audio signal from the microphone element of the headphone section input through the second input terminal, for generating the cancel audio signal for canceling the sound around the user, and for supplying the cancel audio signal to the signal acoustic transducing element of the headphone section through the second terminal; and

a circuit configuration for canceling the sound surrounding the user used by the control circuit section that is of a feedback system.

--12. (Cancelled)

--13. (Currently Amended) A headphone comprising:

a box for housing a microphone element for detecting sound around a user, a signal acoustic transducing element functioning as a sound source for canceling the sound around the user, and an adjusting section including an adjusting element manually operable by the user for adjusting a cancel amount of the ambient sound around the user within a range of 50 Hz to 1.5 kHz; and

an output terminal for a microphone audio signal whose sound is collected by the microphone element, and an input terminal for a cancel audio signal supplied to the signal acoustic transducing element.